CLAIMS

1. A radio base station apparatus comprising;

a fading correlation monitoring means that monitors a fading correlation among the received radio waves received from a plurality of antenna elements, and

a radio transmitting means that, based on the fading correlation monitored by said fading correlation monitoring means, carries out signals radio transmission while switching between directive transmission in which signals are formed with certain directivity and transmitted thereby and diversity transmission by which signals from a plurality of branches are combined or selected and transmitted thereby.

2. The radio base station apparatus according to claim 1, wherein;

said diversity transmission is any kind of diversity selected from the group consisting of the selective diversity transmission, the closed loop type diversity transmission and the maximal-ratio combining diversity transmission.

3. The radio base station apparatus according to claim 1, wherein;

said radio transmitting means transmits the signals using the directive transmission when the fading correlation monitored by said fading monitoring means is higher than a predetermined threshold value, and radio transmitting means transmits the signals using the diversity transmission when the fading correlation monitored by said fading monitoring means is lower than said threshold value.

4. The radio base station apparatus according to claim 1, wherein;

said radio transmitting means makes the transmitting power consumed by diversity transmission lower than the transmitting power consumed by directive transmission.

5. The radio base station apparatus according to claim 1, wherein;

said correlation monitoring means estimates the angle spread of a received signal from a communication partner and monitors the fading correlation referring to the estimated angle spread.

6. The radio base station apparatus according to claim 1, wherein;

said fading correlation monitoring means calculates a fading correlation value and monitors the fading correlation referring to the calculated fading correlation value.

7. The radio base station apparatus according to claim 1, wherein;

said fading correlation monitoring means estimates a distance between its own apparatus and the communication partner and monitors the fading correlation referring to the estimated fading correlation value.

8. A radio base station apparatus comprising;

a fading correlation monitoring means that monitors a fading correlation among the received radio waves received via a plurality of antenna elements, and

a radio receiving means that, based on the fading

correlation monitored by said fading correlation monitoring means, carries out signals radio reception while switching between directive reception by which the signals are formed with the directivity and received thereby and diversity reception by which the signals from a plurality of branches are appropriately combined and received thereby.

9. A radio communication method comprising;

a step that monitors the fading correlation of the received radio waves received via a plurality of antenna elements, and

a step that carries out signals radio transmission based on said monitored fading correlation, while switching between directive transmission by which the signals are formed with the directivity and transmitted thereby and diversity transmission by which the signals from a plurality of branches are appropriately combined and transmitted thereby.